

# ELECTROLYTIC ZINC WORKS

Founded 1917



## GETTING STARTED

Industry was lured to Tasmania following the construction of the Waddamana Power Station by the Hydro Electric Power and Metallurgical Company in 1915. Offering power at low cost proved highly attractive to large consumers including those using electrolysis to produce metals.

Historically the Broken Hill companies primarily sold zinc concentrates to Germany and Belgium, however when Germany overran Belgium early in World War I, the market diminished. With the Western Allies producing very little zinc necessary for manufacturing armament, the demand elevated the price significantly creating an attractive zinc production investment opportunity.

## THE ELECTROLYTIC PROCESS

The process used at Hobart is known as a Roast-Leach-Elecrowin, and is typical of zinc plants using zinc sulphide concentrates.



### Roasting

Concentrates are burnt in air to produce crude zinc oxide (Calcine) and sulphur dioxide

### Leaching & Purification

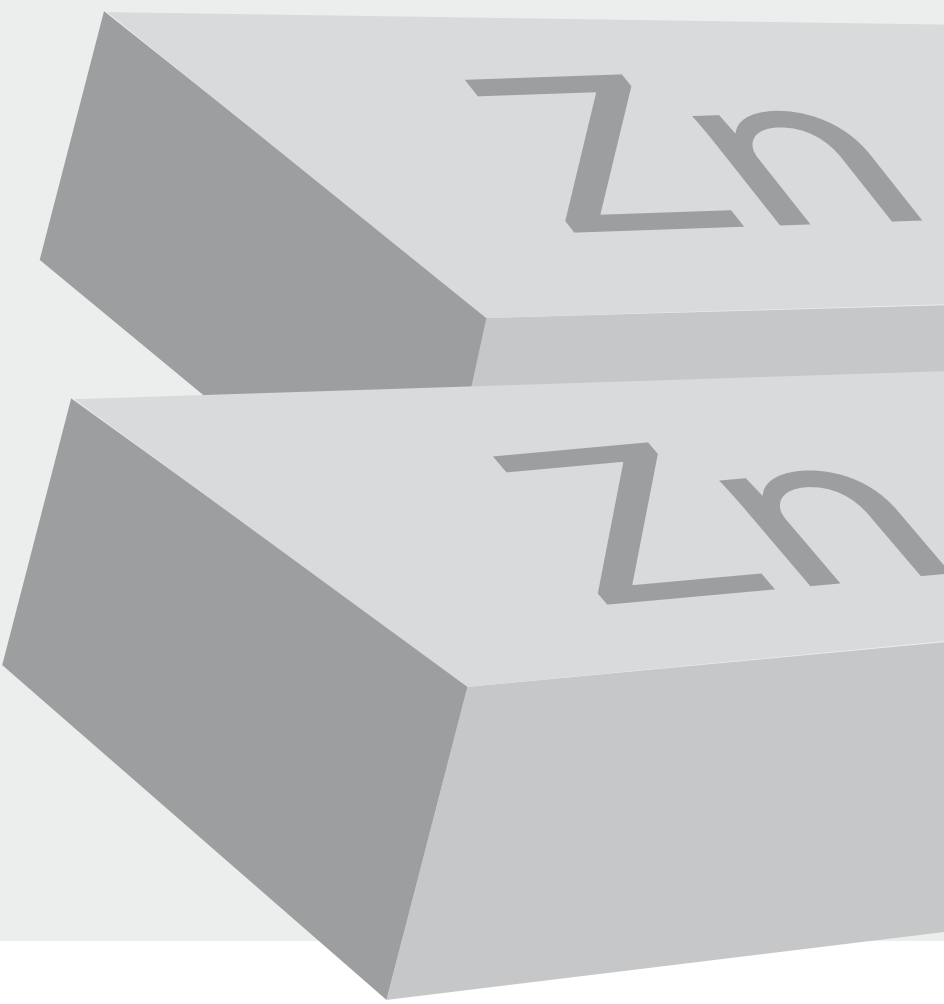
Calcine is dissolved in a dilute sulphuric acid, the resulting solution is then purified

### Electrowinning

Electric current is used to plate out the zinc on aluminium cathodes and produce dilute sulphuric acid. The acid produced is used in the leaching stage.

### Casting

The Zinc is removed from the cathodes and melted into various market ready products



## CONSTRUCTING THE WORKS

The Electrolytic Zinc Company was formed in 1916 through a consortium of Broken Hill companies. The plant grew from a small-scale test unit in 1916 to a larger unit in 1917 before becoming a 100 tonne per day operation by 1921.

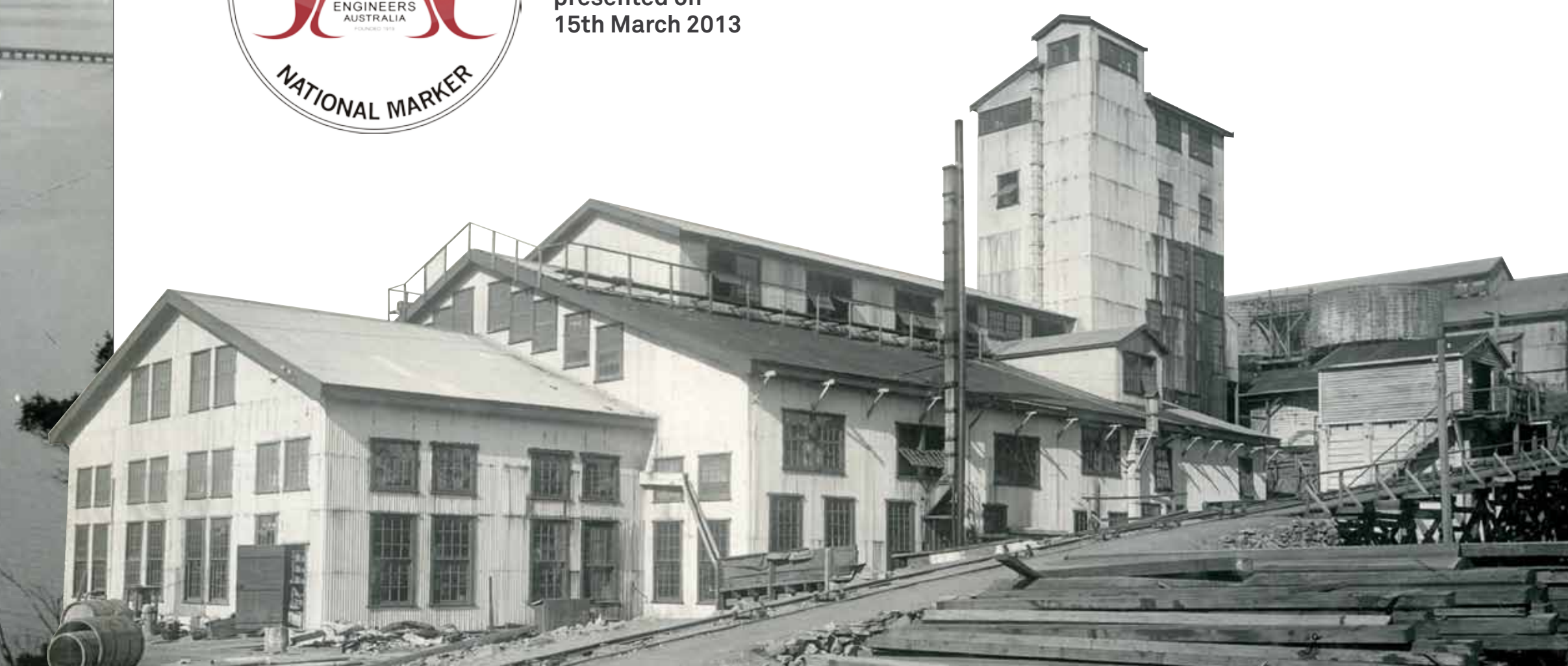
Over the years the plant has been expanded and modified to increase production to the current levels.



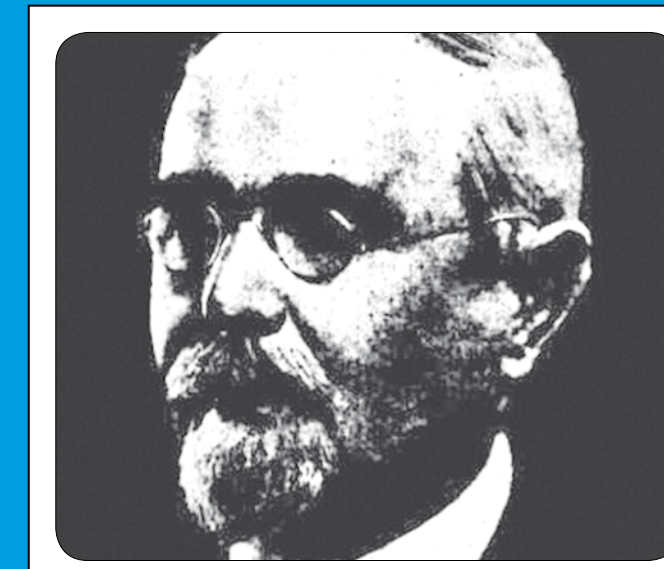
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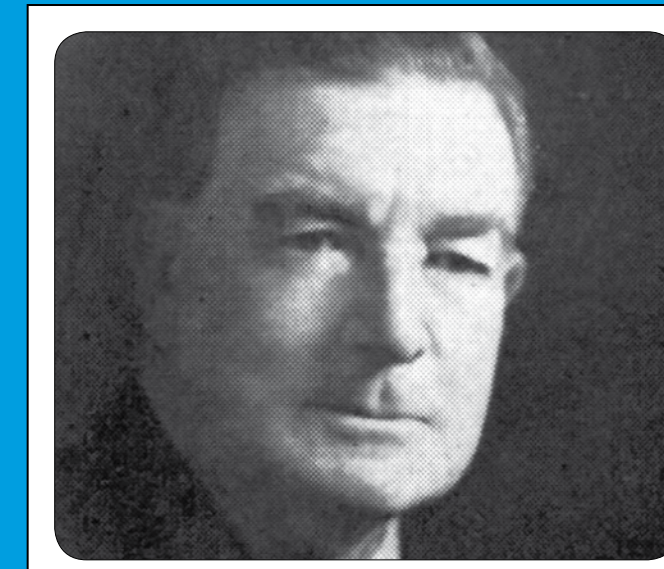
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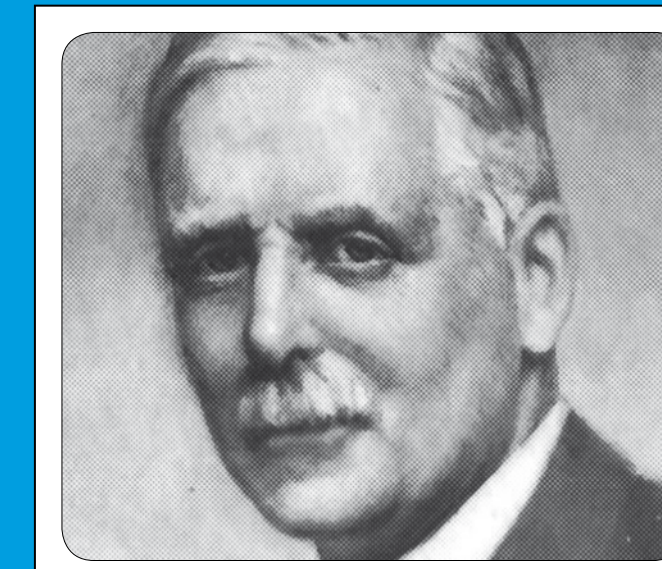
## IMPORTANT PEOPLE



**James Gillies**  
Gillies was the entrepreneur behind the construction of the Waddamana power station, built specifically to make zinc. Establishing the foundations for the electricity supply, Gillies is referred to as the Father of Tasmanian Industry.



**Herbert Gepp**  
The first General Manager of the Electrolytic Zinc Company, Gepp steered the business through turbulent beginnings presenting technical challenges. Gepp was very community minded and instrumental in establishing employee-benefits, including the housing scheme.



**William Baillieu**  
Baillieu was confident of the company's success and influential in its establishment. When the company was publicly listed during the Great Depression, he put his family fortune on the line to underwrite any share issues.

## COMMUNITY BENEFITS

Community minded values were reflected through internal initiatives including an insurance scheme with employee houses established at Lutana and a Co-operative Council founded providing supplies including firewood and meat at low cost.

The flow on economic benefits to the broader Tasmanian community has been significant through the wages bill and contribution to the gross state product as a leading exporter and employer, attested to by the number of people who know, or have known, someone associated with the zinc works.

